

## OIB - HU-25A Guardian #524 07/17/17 Science Report

**Aircraft:** [HU-25A Guardian - LaRC #524](#) ([See full schedule](#))

**Date:** Monday, July 17, 2017

**Mission:** OIB

**Mission Location:** Greenland

**Mission Summary:**

OIB conducted the first flight of the summer campaign with the "Convergence West" flight plan. The purpose of this flight is to take measurements north of Ellesmere Island to study sea ice thickness and ridge height changes due to the piling up of sea ice (or convergence) as the movement of ice pushes it up against the coast. We will attempt to repeat this flight near the end of the campaign to assess the changes due to ice motion. Satellite imagery from Worldview will also be collected over this region allowing for scaling of the high resolution airborne imagery to those from the satellite.

The weather forecast for the day showed good conditions over all but the western part of the mission. A mixture of patchy clouds and clear skies were present along the eastern part of the flight lines making for overall good data collection. The clouds became thicker towards western part of the line with most data lost ~20 nm from the end of the line but with some small holes in the clouds allowing for some data to be collected.

Data was collected at high altitude over Ellesmere Island during the transit as conditions were largely clear, this included Headwall spectrometer data which was turned on to help assess green laser penetration into snow during summer melt conditions.

Data volumes

ATM: 37 Gb

FLIR: 4.2 Gb

DMS: 19 Gb

Headwall: Collected data

data on: 1427

data off: 1636

**Submitted by:** Nathan T. Kurtz on 07/17/17

**File:**



[convergence\\_west\\_map.pdf](#)

**Related Flight Report:**

### HU-25A Guardian #524 07/17/17

**Flight Number:** OIB Summer Science Data Flight#1

**Payload Configuration:** ATM

**Nav Data Collected:** No

**Total Flight Time:** 3.8 hours

**Submitted by:** Luci Crittenden on 07/17/17

**Flight Segments:**

<b>From:</b>	BGTL	<b>To:</b>	BGTL
<b>Start:</b>	07/17/17 13:38 Z	<b>Finish:</b>	07/17/17 17:25 Z
<b>Flight Time:</b>	3.8 hours		
<b>Log Number:</b>	<a href="#">17F001</a>	<b>PI:</b>	Nathan Kurtz
<b>Funding Source:</b>	Thomas Wagner - NASA - SMD - ESD Cryospheric Science		
<b>Purpose of Flight:</b>	Science		
<b>Comments:</b>	OIB Falcon Summer Science Data Flight #1 was flown out of Thule, Greenland today. Flight profile flown was the Convergence West mission.		

**Flight Hour Summary:**

	<b>17F001</b>
<b>Flight Hours Approved in SOFRS</b>	44.2

<b>Total Used</b>	39.5
<b>Total Remaining</b>	4.7

#### 17F001 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
<a href="#">07/10/17</a>	OIB Summer Science ICF	Check	3.7	3.7	40.5	
<a href="#">07/12/17</a>	2017 OIB Summer Science Transit	Transit	2.9	6.6	37.6	
<a href="#">07/12/17</a>	2017 OIB Summer Science Transit	Transit	2.3	8.9	35.3	
<a href="#">07/13/17</a>	2017 OIB Summer Science Transit BGSL-BGTL	Transit	1.9	10.8	33.4	
<a href="#">07/17/17</a>	OIB Summer Science Data Flight#1	Science	3.8	14.6	29.6	
<a href="#">07/18/17</a>	OIB Summer Science Data Flight #2	Science	3.7	18.3	25.9	
<a href="#">07/19/17</a>	OIB Summer Science Data Flight #3	Science	2.7	21	23.2	
<a href="#">07/24/17</a>	OIB Summer Science Data Flight #4	Science	3.9	24.9	19.3	
<a href="#">07/25/17</a>	OIB Summer Science Data Flight #5 & #6	Science	3.7	28.6	15.6	
<a href="#">07/25/17</a>	OIB Summer Science Data Flight #5 & #6	Science	3.5	32.1	12.1	
<a href="#">07/26/17</a>	OIB Transit Legs BGTL-BGSL-KBGR	Transit	2	34.1	10.1	
<a href="#">07/26/17</a>	OIB Transit Legs BGTL-BGSL-KBGR	Transit	3.7	37.8	6.4	
<a href="#">07/27/17</a>	OIB Transit Leg KBGR-KLFI	Transit	1.7	39.5	4.7	

*Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.*

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NASA Official: Bruce A. Tagg

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